

Abstract of the Disclosure

The present invention relates to a pneumatic servo valve, and more particularly, to a pneumatic servo valve, wherein displacement of a spool due to flow force of a fluid is prevented by firmly holding the spool just after position control for the spool is completed, thereby ensuring the stability of a valve system, and an encoder is employed as a spool position detecting means. The pneumatic servo valve comprises a hollow main body with a supply port, a discharge port and an exhaust port; a sleeve which is contained in a hollow portion of the main body and has slots communicating with the respective ports, and a chamber therein; a spool axially slidably installed within the chamber to control the flow of a fluid into the respective ports according to the position thereof; a torque motor installed at one side of the main body to control the position of the spool in response to electrical signals; and a spool position detecting means for compensating positional errors by receiving the feedback position of the spool. The pneumatic servo valve further comprises a spool holding means including a ball nut 60 which is engaged, via a ball, with a helical groove formed on a connection rod of the spool connected to the torque motor and rotates when the spool moves linearly, and an electronic brake for holding the ball nut not to rotate when the spool is stopped.